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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/866,822	05/29/2001	Dagnachew Birru	US 010264	5104

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER

WARE, CICELY Q

ART UNIT	PAPER NUMBER
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2611

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/866,822	BIRRU, DAGNACHEW	
	Examiner	Art Unit	
	Cicely Ware	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-4 and 13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-4 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 November 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 11/15/2006 have been fully considered but they are not persuasive.

a. On Pgs. 5-9 of applicant's **REMARKS** applicant asserts that the abstract of Tsujimoto does not teach "a first adder, a second adder, a decision device and a feedback equalizer arranged to form a first feedback loop".

Examiner disagrees. Examiner asserts that on Pgs. 3-4 of the office action it can be seen that the (abstract)t is used to reference the decision device and a feedback equalizer. On Pg. 3 of the office action it can be seen that (col. 2, lines 36-45) is used to reference the first and second adders. Therefore the abstract is used for only the decision device and a feedback equalizer, which is recited in lines 11-14. (col. 2, lines 36-45) gives a more detailed description of Fig. 2, which is partially described in the abstract. Examiner asserts that the abstract can be used in a rejection, the whole patent is taken into account.

b. On Pg 7 of applicant's **REMARKS** applicant states that no motivation was given to combine the references of Tsujimoto in view of Kim.

Examiner disagrees. On Pg. 3 of the office action examiner recites the motivation as "to alleviate the large amount of current that is consumed in order to operate the DFE". This motivation was taken from a patent that was used in the rejection and was not made up by the examiner.

c. On Pg. 5 of applicant's **REMARKS** applicant states that Tsujimoto in view

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of Kim do not disclose "the filter being in parallel with the feedback equalizer to compensate for a delay introduced by the feedback equalizer".

Examiner agrees that Kim does not disclose "first feedback loop/second feedback loop or the filter being in parallel with the feedback equalizer to compensate for a delay introduced by the feedback equalizer".

However Examiner asserts that Lim in Fig. 6 discloses a pipelining technique wherein "a first feedback/second feedback loop (60, 50) or the filter (50a) being in parallel with the feedback equalizer (60) to compensate for a delay introduced by the feedback equalizer".

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2, 3 are rejected under 35 U.S.C. 103(a) as being anticipated by Tsujimoto (US Patent 5,345,476) in view of Lim (US Patent 5,748,674).

(1) With regard to claim 2, Tsujimoto discloses in (Fig. 2) a decision feedback equalizer, comprising: a first adder, a second adder (col. 2, lines 36-45), a decision device and a feedback equalizer arranged to form a first feedback loop (abstract); the second adder, the decision device (15), and a filter arranged to form a second feedback loop (abstract, col. 6, lines 38-41, 67-68 – col. 7, line 1).

However Tsujimoto does not disclose the filter being in parallel with the feedback equalizer to compensate for a delay introduced by the feedback equalizer such that the second feedback loop is free of an implementation delay associated with the first feedback loop.

However Lim discloses in (Fig. 6) the filter (50a) being in parallel with the feedback equalizer (60) to compensate for a delay introduced by the feedback equalizer such that the second feedback loop is free of an implementation delay associated with the first feedback loop (col. 3, lines 47-54).

Therefore it would have been obvious to one of ordinary skill in the art to modify Tsujimoto in view of Lim to incorporate the filter being in parallel with the feedback equalizer to compensate for a delay introduced by the feedback equalizer such that the second feedback loop is free of an implementation delay associated with the first feedback loop in order to prevent performance degradation of the system which occurs due to a pipelining delay (col. 3, lines 47-54).

(2) With regard to claim 3, claim 3 inherits all the limitations of claim 2. Tsujimoto further discloses wherein the filter is implemented in fast logic (no delay due to pipelining) (abstract, col. 3, lines 3-9, col. 5, lines 30-54, col. 6, lines 1-4, 38-60, col. 7, lines 3-24).

(3) With regard to claim 4, claim 4 inherits all the limitation of claim 2. Lim further discloses a digital television receiver including the DFE (col. 2, lines 22-29).

(4) With regard to claim 13, see rejection of claim 2.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cicely Ware whose telephone number is 571-272-3047. The examiner can normally be reached on Monday – Friday, 8-5.

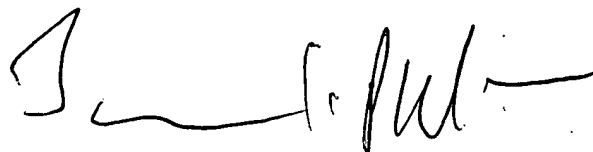
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammed Ghayour can be reached on 571-272-3021. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Cicely Ware

cqw
January 31, 2007

A handwritten signature in black ink, appearing to read 'J. K. Patel', with a long horizontal stroke extending to the right.

JAY K. PATEL
SUPERVISORY PATENT EXAMINER